

CLAIMS

1. An apparatus comprising:

a lower support base;

at least one tendon receiving portion, said tendon receiving portion comprising a first point and a second point, said first point and said second point being configured to move away from each other in a direction generally perpendicular to a downward force, said tendon receiving portion comprising an inner diameter that is smaller than the outer diameter of a tendon; and

at least one connecting leg, said connecting leg connecting said lower support base and said tendon receiving portion.
2. The apparatus of claim 1 wherein said at least one connecting leg comprises a plurality of connecting legs, wherein each of said plurality of connecting legs are connected to said lower support base.
3. The apparatus of claim 1 wherein said at least one tendon receiving portion, comprises a plurality of tendon receiving portions, each of said tendon receiving portions comprising a first point and a second point, said first point and said second point being configured to move away from each other in a direction generally perpendicular to a downward force, said tendon receiving portion comprising an inner diameter that is smaller than the outer diameter of a tendon.

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4. The apparatus of claim 1 wherein said lower support base is a circular lower support base.
5. The apparatus of claim 1 further comprising a substantially circular and flat upper support base.
6. The apparatus of claim 5 further comprising at least one connecting leg connecting said lower support base and said substantially circular and flat upper support base and said tendon receiving portion.
7. The apparatus of claim 6 further comprising a third substantially circular and flat support base connected to said at least one connecting leg.
8. The apparatus of claim 1 further comprising:
 - a substantially circular and flat upper support base;
 - a plurality of connecting legs are connected to said lower support base; and
 - a plurality of tendon receiving portions, each of said tendon receiving portions comprising a first point and a second point, said first point and said second point being configured to move away from each other in a direction generally perpendicular to a downward force, said tendon receiving portion comprising an inner diameter that is smaller than the outer diameter of a tendon.

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9. The apparatus of claim 1 wherein said at least one tendon receiving portion comprises:
 - a first tendon receiving portion;
 - a second tendon receiving portion; and
 - a third tendon receiving portion.
10. The apparatus of claim 9 further comprising:
 - a first section of a first tendon inserted into said first tendon receiving portion;
 - a first section of a second tendon inserted into said second tendon receiving portion;
 - and
 - a second section of a second tendon inserted into said third tendon receiving portion.
11. The apparatus of claim 10 wherein:
 - said first tendon is substantially perpendicular to said second tendon;
 - said first tendon is oriented in a first plane and said second tendon is oriented in a second plane;
 - said first plane and said second plane are substantially parallel; and
 - said first tendon and said second tendon are encased within a slab-on-grade foundation.

12. A tendon support structure comprising:
 - a substantially flat and circular upper support ring;
 - a substantially flat and circular lower support ring;
 - a first tendon-receiving portion coupled to said upper and lower support rings, said first tendon-receiving portion being configured to receive a first tendon, said first tendon defining a first diameter, said first tendon-receiving portion comprising a first point and a second point, said first point and said second point defining a first distance, said first distance being less than said first diameter;
 - a second tendon-receiving portion coupled to said upper and lower support rings, said second tendon-receiving portion being configured to receive a second tendon, said second tendon defining a second diameter, said second tendon-receiving portion comprising a third point and a fourth point, said third point and said fourth point defining a second distance, said second distance being smaller than said second diameter; and
 - a third tendon-receiving portion coupled to said upper and lower support rings, said third tendon-receiving portion being configured to receive said second tendon, said third tendon-receiving portion comprising a fifth point and a sixth point, said fifth point and said sixth point defining a third distance, said third distance being smaller than said second diameter.
13. The tendon support structure of claim 12 wherein said substantially flat and circular upper support ring and said substantially flat and circular lower support ring are positioned within substantially parallel planes.

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14. The tendon support structure of claim 12 further comprising a first tendon inserted into said first tendon receiving portion.
15. The tendon support structure of claim 12 further comprising a second tendon inserted into said second tendon receiving portion and said third tendon receiving portion.
16. The tendon support structure of claim 12 wherein said tendon support structure is encased within a slab-on-grade foundation.
17. The tendon support structure of claim 12 further comprising:

a first tendon inserted into said first tendon receiving portion; and

a second tendon inserted into said second tendon receiving portion and said third tendon receiving portion.
18. The tendon support structure of claim 17 wherein said tendon support structure and said first tendon and said second tendon are encased within a slab-on-grade foundation.
19. The tendon support structure of claim 12 wherein said first substantially flat and circular upper support ring and said second substantially flat and circular lower support ring are connected by a plurality of connecting legs.

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20. A method comprising the steps of:
- inserting a section of a first tendon into a first tendon-receiving portion;
- inserting a first section of a second tendon into a second-tendon receiving portion; and
- inserting a second section of said second tendon into a third-tendon receiving portion.
21. The method of claim 20 wherein said first tendon is substantially perpendicular to said second tendon.
22. The method of claim 20 wherein said first tendon is oriented in a first plane and said second tendon is oriented in a second plane.
23. The method of claim 22 wherein said first plane and said second plane are substantially parallel.
24. The method of claim 20 wherein:
- said first tendon is substantially perpendicular to said second tendon;
- said first tendon is oriented in a first plane and said second tendon is oriented in a second plane; and
- wherein said first plane and said second plane are substantially parallel.

25. The method of claim 20 wherein said step of inserting a section of said first tendon into said first tendon-receiving portion comprises the step of exerting a downward force on said first tendon-receiving portion, thereby moving a first point and a second on said first tendon-receiving portion away from each other in response to and in a direction generally perpendicular to said downward force.
26. The method of claim 20 wherein said step of inserting a first section of a second tendon into a second-tendon receiving portion comprises the step of exerting a downward force on said second tendon-receiving portion, thereby moving a first point and a second on said second tendon-receiving portion away from each other in response to and in a direction generally perpendicular to said downward force.
27. The method of claim 20 wherein said step of inserting a second section of said second tendon into a third-tendon receiving portion comprises the step of exerting a downward force on said third tendon-receiving portion, thereby moving a first point and a second on said third tendon-receiving portion away from each other in response to and in a direction generally perpendicular to said downward force.

28. The method of claim 20 wherein:

said step of inserting a section of said first tendon into said first tendon-receiving portion comprises the step of exerting a downward force on said first tendon-receiving portion, thereby moving a first point and a second on said first tendon-receiving portion away from each other in response to and in a direction generally perpendicular to said downward force;

wherein said step of inserting said first section of said second tendon into a second-tendon receiving portion comprises the step of exerting a downward force on said second tendon-receiving portion, thereby moving a first point and a second on said second tendon-receiving portion away from each other in response to and in a direction generally perpendicular to said downward force; and

wherein said step of inserting a second section of said second tendon into said third-tendon receiving portion comprises the step of exerting a downward force on said third tendon-receiving portion, thereby moving a first point and a second on said third tendon-receiving portion away from each other in response to and in a direction generally perpendicular to said downward force.

29. A reinforced concrete slab-on-grade foundation comprising:
- a plurality of tendon support structures, each of said plurality of tendon support structures comprising:
 - a substantially flat and circular upper support ring;
 - a substantially flat and circular lower support ring;
 - a lower a first tendon-receiving portion;
 - a second-tendon receiving portion;
 - a third-tendon receiving portion, wherein each of said first, second, and third tendon-receiving portions is configured to receive a section of a tendon; and
 - a plurality of connecting legs connecting said substantially flat and circular upper support ring, substantially flat and circular lower support ring, and said first, second and third tendon-receiving portions;
 - a first group of tendons inserted into at least some of said tendon-receiving portions of said plurality of support structures; and
 - a second group of tendons inserted into at least some of said tendon-receiving portions of said plurality of support structures, said first group of tendons being positioned in a first plane, said second group of tendons being positioned in a second plane, each of said first group of tendons being substantially perpendicular to each of said second group of tendons, said first group of tendons and said second group of tendons performing a latticework.

30. A multi-piece tendon support structure comprising:
- a lower support base, said lower support base comprising:
 - a support cylinder, said support cylinder defining a support base opening;
 - a plurality of connecting legs coupled to said support cylinder; and
 - a support ring coupled to said plurality of connecting legs;
 - and
 - an insert portion, said insert portion being configured to be selectively inserted into said support base opening, said insert portion comprising:
 - a neck portion; and
 - a plurality of tendon-receiving portions coupled to said neck portion.
31. The multi-piece tendon support structure of claim 30 wherein each of said plurality of tendon receiving portions comprises:
- a first point; and
 - a second point, said first point and said second point being configured to move away from each other in a direction generally perpendicular to a downward force, each of said tendon receiving portions comprising an inner diameter that is smaller than the outer diameter of a tendon.

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32. The multi-piece tendon support structure of claim 30 wherein said insert portion being is inserted into said support base opening and is rotatable within said support base opening.
33. The multi-piece tendon support structure of claim 30 further comprising:

a first tendon inserted into a first of said plurality of tendon-receiving portions; and

a second tendon inserted into a second of said plurality of tendon-receiving portions.